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[54] GENE DELIVERY SYSTEM

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[57] ABSTRACT

A gene delivery system is made of enzymatically degradable polymeric cation and nucleic acid (DNA or RNA) nanospheres optionally with a linking moiety or a targeting ligand attached to the surface. The delivery system can be made by a simple method of coacervation. Targeting ligands can be attached to the nanosphere directly or via a linking moiety. The linkage design allows the attachment of any molecule onto the nanosphere surface including antibodies, cell adhesion molecules, hormones and other cell-specific ligands.

27 Claims, 22 Drawing Sheets